

Claims

1. A construction in electric motor drive,
5 where an asynchronous motor, such as drum motor,
which has a stator (2) mounted on a non-rotatory
shaft (1), and around the stator is a rotor (4),
which is rotatory, like by means of bearings (3),
connected on the same shaft (1) and has a short-
10 circuit arrangement, is designed to drive a machine
construction (actuator), characterized in that the
functional part of the machine construction
(actuator), like conveyor's (5) driving roll (5a,
5b, 5c), is arranged to operate by having short-
15 circuit arrangement as the rotor (4) of the
asynchronous motor.

2. The structure as claimed in claim 1,
wherein the short-circuit arrangement is established
20 by the short circuiting bars (4b, 4b') and rings
(18) supported on the rotor's shell (4a, 4a'),
characterized in that the short-circuiting bars (4b,
4b') and rings (18) belonging to the short-circuit
arrangement are arranged integral with the rotor's
25 (4) shell (4a, 4a'), which is a functional part of
the machine construction (actuator), like conveyor's
driving roll (5).

3. The structure as claimed in claim 1 or
30 claim 2, wherein an asynchronous motor is arranged
to be cooled by having a fluid flow, characterized
in that the cooling of the asynchronous motor is
realized in a closed system, by carrying cooling

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7. The structure as claimed in some of the claims 1-6, characterized in that the rotor is

formed as a shell of a pulley (4) which is part of a vacuum belt conveyor (5) comprising a stationary vacuum box (11), the rotor drive further comprising: said central shaft (1) being supported by at least one supporting bracket (8) which is connected to the vacuum box (11).

8. The structure as claimed in some of the claims 1-7, characterized in that the "drum motor's supporting brackets (8) can be used also as a connection surface(s) of the vacuum belt conveyor's accessories (e.g. knife plates, rotary rippers and choppers).

15 9. The structure as claimed in claim 7,
characterized in that the distance D between the
bearings (3) supporting the pulley (4) is larger
than the length L of the pulley's shell (4a).

20 10. The structure as claimed in claim 9,
 wherein each flange (7) which connects an end of
 shell (4a, 4a') to one of the bearings (3) is formed
 as a bushing which bridges the distance between
 length L and D.

11. The structure as claimed in claim 9, wherein each supporting bracket (8) - seen in a longitudinal section of the conveyor (5), in Figure 5 - is formed double-folded similar to a Z.

12. Method for electric motor drive, where a machine construction (actuator) used by an asynchronous motor, such as drum motor, which has a

stator (2) mounted on a non-rotatory shaft (1) and
around the stator is a rotor (4), which is rotatory,
like by means of bearings (3), connected on the same
shaft (1) and has a short-circuit arrangement,
5 characterized in that the functional part of the
machine construction (actuator), like conveyor's (5)
driving roll (5a), operates by having short-circuit
arrangement as the rotor (4) of the asynchronous
motor.

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13. Method as claimed in claim 12 with
asynchronous motor, where the short-circuit
arrangement is realized in connection with the
rotor (4) like having short-circuit conductor bars
15 (4b, 4b') and rings (18) supported on the rotor's
shell (4a), characterized in that to the short-
circuit arrangement operate at least partly
internally as the rotor's (4) shell (4a, 4a') of the
operating functional part of the machine
20 construction (actuator), such as conveyor's driving
roll (5a, 5b, 5c).

25 14. Method as claimed in claim 12 or 13
wherein a asynchronous motor is cooled by having a
fluid flow, characterized in that the cooling of the
asynchronous motor is realized as closed by carrying
cooling fluid, such as over-press cooling air (x)
hermetically essentially in axial direction with
it's primary flow arrangement (1a) through the
30 stator shaft (1) like hollow shaft or pipe and/or
through with secondary flow arrangement (4c)
equipped short-circuit conductors (4b') like hollow
bars or pipes.

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